

What the invention claimed is:

1. A banknote acceptor comprising:

a housing, said housing comprising an insertion slot in a face panel thereof for receiving banknote, and a conveying and
5 banknote holding down mechanism;

a money box mounted in said housing and adapted to collect banknote from said insertion slot; and

a banknote verification assembly mounted in said housing and adapted to verify the authenticity of the inserted banknote, for
10 enabling the verified banknote to be delivered to the inside of said money box by said conveying and banknote holding down mechanism;

wherein:

said banknote verification assembly comprises:

15 a transmitter holder base, said transmitter holder base having a detection side;

a receiver holder base, said receiver holder base having a detection side facing the detection side of said transmitter holder base;

20 a banknote passage defined between the detection side of said transmitter holder base and the detection side of said receiver holder base in communication between said insertion slot and said money box;

an optical transmitter module mounted in the detection side of said transmitter holder base, said optical transmitter module comprising at least one ultraviolet light emitting diode adapted to emit ultraviolet light onto the banknote being delivered from said insertion slot through said banknote passage;

an optical receiver module mounted in the detection side of said receiver holder base, said optical receiver module comprising at least one phototransistor adapted to receive light passing from said optical transmitter module through the banknote being delivered from said insertion slot through said banknote passage and to produce a corresponding output signal; and

a control unit adapted to receive outputted signal from said optical receiver module and to determine the authenticity of the banknote being delivered from said insertion slot through said banknote passage subject to the output signal received from said optical receiver module.

2. The banknote acceptor as claimed in claim 1, wherein said banknote verification assembly further comprises a communication interface module connectable to an external main unit adapted to set operation modes of said control unit.

3. The banknote acceptor as claimed in claim 2, wherein said banknote verification assembly further comprises a transmission module mounted in said conveying and banknote

holding down mechanism for enabling the inserted banknote to be delivered from said insertion slot through said banknote passage to said money box.

4. The banknote acceptor as claimed in claim 3, wherein
5 said banknote verification assembly further comprises a power module adapted to convert external power supply into the desired working voltage for said optical transmitter module, said optical receiver module, said control unit, said communication interface module, and said transmission module, for enabling said control
10 unit to control the operation of said optical transmitter module, said optical receiver module, said communication interface module and said transmission module subject to a predetermined program.

5. The banknote acceptor as claimed in claim 1, wherein said optical transmitter module comprises a NPN transistor and a
15 current-limit resistor, said NPN transistor having a base electrically connected to said control unit, a collector electrically connected to said at least one ultraviolet light emitting diode, and an emitter electrically connected to said current-limit resistor, said current-limit resistor having a first end electrically connected to
20 the emitter of said NPN transistor and a second end electrically connected to a grounding loop for enabling said control unit to control the intensity of ultraviolet light of said at least one ultraviolet light emitting diode.

6. The banknote acceptor as claimed in claim 5, wherein
said optical receiver module comprises a shunt resistor, said shunt
resistor having a first end electrically connected to said at least one
photo transistor and said control unit and a second end electrically
5 connected to the grounding loop to which said current limit resistor
is connected.

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